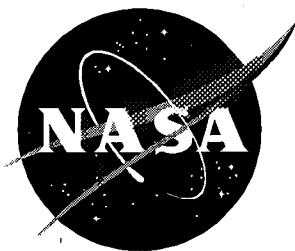


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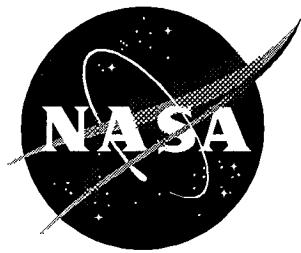
Edited by

*Upendra N. Singh and Syed Ismail
Langley Research Center, Hampton, Virginia*

*Geary K. Schwemmer
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July 1998

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Nineteenth International Laser Radar Conference

Edited by

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Preface to 19th ILRC Proceedings

This publication contains the written submissions to the 19th International Laser Radar Conference (ILRC), held at the United States Naval Academy and the Loews Annapolis Hotel, in Annapolis, Maryland, July 6-10, 1998. Held biennially under the auspices of the International Coordination Group for Laser Atmospheric Studies, the ILRC brings together an interdisciplinary group of researchers working in the field of laser remote sensing, and is perhaps the largest regular gathering dedicated solely to lidar in the world. Included are over 260 papers from around the world, covering a wide range of lidar subjects including new lidar techniques and component technologies, atmospheric profiling, terrestrial, and marine applications, space based and future lidar systems. We have also included a small session to address subjects such as commercialization, safety and legal issues involving lidar, areas not normally associated with research, but ones that will nevertheless influence the development of lidar into the next century.

The ILRC is unique among professional technical conferences in that it is run by a different group of individuals within the lidar community every time it is held, rather than by a quasi-permanent team sponsored by a large professional society or organization. Each venue is located in a different part of the world and each group imparts its own culture and personal ideas to it. The 19th ILRC committee members proudly present our best efforts to the lidar community, hoping that this ILRC is among your most fruitful and memorable experiences. We feel that you will find the content of the ILRC to be of high interest and quality, and that is due mainly to the high quality of your research contributions.

In putting together the 19th ILRC, we strove to encourage and highlight as many new research topics and researchers as possible while keeping a balance with more mature applications and lidar veterans. The framework for the technical program is given by the parent organization ICLAS. It contains no parallel sessions other than poster sessions, which are held separately from the oral sessions. This allows for approximately 100 oral and 160 poster presentations. The majority of the papers are given in the poster sessions, which are more conducive to personal and information interchange. To further emphasize the poster presentations, the conference award committee is offering two prizes to help highlight this important part of the ILRC. To miss the poster sessions is to miss most of the content of the ILRC.

We would like to acknowledge the innumerable contributions of the conference support staff at Jorge Scientific Corporation, in particular, Mr. Brit Griswold and Mr. Todd R. Del Priore for graphics and web page designs. Acknowledgments are also due to Mr. Vince Bracket and Mr. Anthony Notari of SAIC for their commendable efforts in receiving the electronic submissions and posting them on the 19th ILRC website. We are also grateful to Dr. Reza Malek-Madani for arranging the United States Naval Academy facilities for this conference. We also thank our many sponsors and supporters for their generous contributions, which made this conference possible.

This two-part document was prepared for publication through the efforts of the staff of the Data Analysis and Imaging Branch of the Information Systems & Services Division, NASA Langley Research Center, including the entire staff of the NCI Information Systems, Inc. Technical Publications group.

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AES (Atmospheric Environment Service)

CSIRO (Commonwealth Scientific and Industrial Research Organization)

DLR (Deutsche Forschungsanstalt für Luft- und Raumfahrt)

ETL (Environmental Technology Laboratory)

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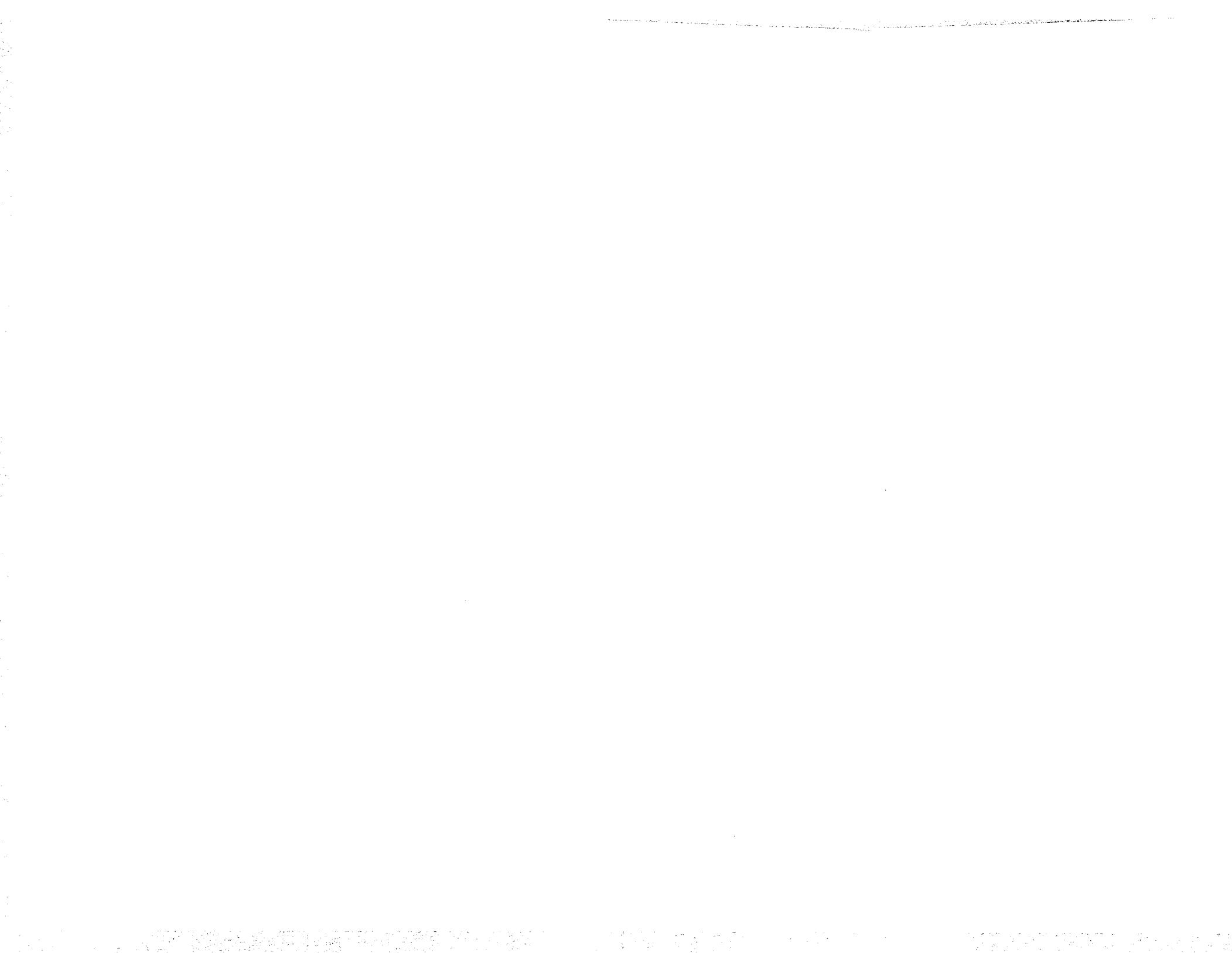
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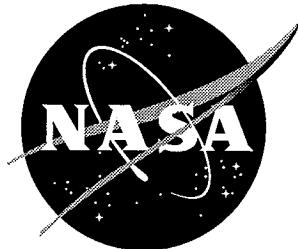
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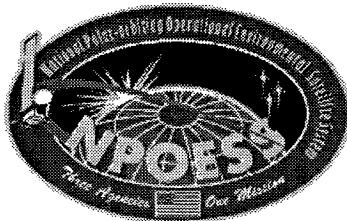
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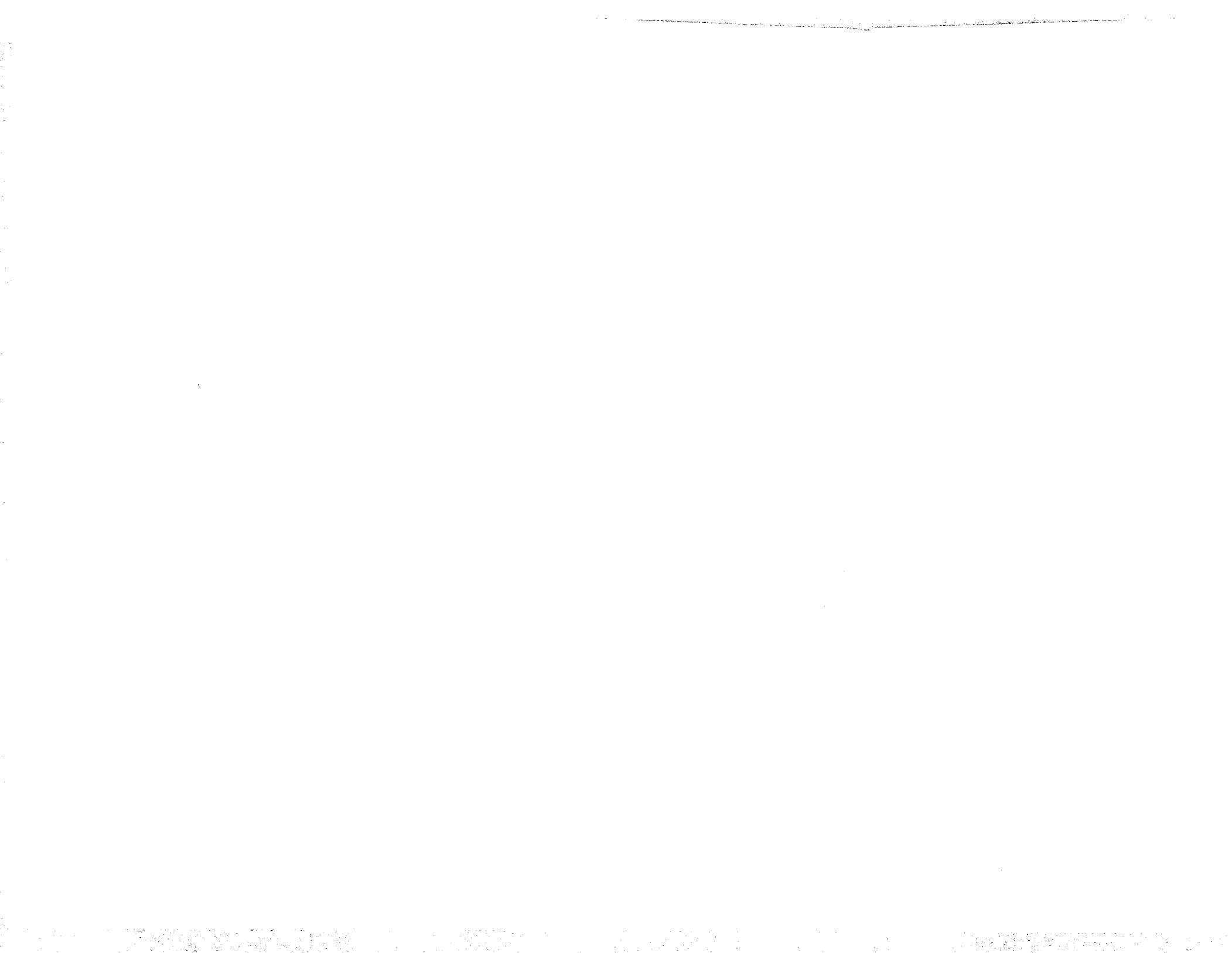
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C. Kumar N. Patel, University of California Los Angeles, Los Angeles, CA.....1

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Guy Brasseur, Atmospheric Chemistry Division, National Center for Atmospheric Research, Boulder, CO
(e-mail: brasseur@ucar.edu)*

3. The Greenhouse Effect and Global Warming

Robert Cess, Institute for Terrestrial and Planetary Atmospheres, State University of New York,
Stony Brook, NY (e-mail: rcess@notes.cc.sunysb.edu)

Oral Session 1 (OS1)

Aerosol, Clouds, and Multiple Scattering

Session Chairs: E. Eloranta and U. Wandinger

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Oral Session 8 (OS8)

Lidar Commercialization and Eye Safety

Session Chairs: T. Kobayashi and L. Stefanutti

Friday, July 10, 1:30 to 3:00 p.m.

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